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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-------------------------|---------------------|------------------|
| 09/344,863 | 06/28/1999 | EDWARD L. SCHLUETER JR. | D/99006 | 9542 |

7590 12/21/2004
JOHN E BECK
XEROX CORPORATION
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ROCHESTER, NY 14644

EXAMINER

HON, SOW FUN

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1772

DATE MAILED: 12/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|----------------------------------|--|
| Office Action Summary | Application No. 09/344,863 | Applicant(s) SCHLUETER ET AL. | |
| | Examiner Sow-Fun Hon | Art Unit 1772 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-15 and 24-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-15, 24-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/28/04 has been entered.

Withdrawn Rejections

2. The obviousness-type double patenting rejection of claims 4-15, 24-27 over US 6,498,918 has been withdrawn due to Applicant's amendment dated 09/28/04.

Claim Objections

3. Claims 11, 26-27 are objected to because of the following informalities: in the Markush group for the polymer claimed, the term "ethylene diene propene monomer" should be rewritten as "ethylene diene propene terpolymer". Appropriate correction is required.

4. Claim 5 is objected to because now that formula 1 represents a polymer, the repeat unit shown requires the attachment of an "n" at the lower right edge of the right bracket, with n being defined as a numeric range. Appropriate correction is required.

Double Patenting

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 4-12, 14-15, 24-27 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 4-16, 20-21 of U.S. Patent No. 6,498,918. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons.

a. Claim 27 of the present application recites “a xerographic fuser component comprising a substrate comprising a polymer selected from the group consisting of fluoropolymers, chloropolymers, silicone rubbers, polyarylenes, ethylene diene propene monomer, nitrile rubbers and mixtures thereof, and thereon a coating consisting essentially of a thiophene-based polymer material, and a heating member associated with said fuser component.”

Regarding the limitation of “a coating consisting essentially of a thiophene-based polymer material”, the term “consisting essentially of”, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, will be construed as equivalent to “comprising.” See MPEP 2111.03[R-2]. Page 16, lines 5-20 of the specification teaches that if the polythiophene coating is the surface coating, then the amount of thiophene is about 100 percent, but also adds in the next line that other polymers and conductive additives can be added. Hence in addition to the absence in the present claims of the term “surface” to further qualify the term “coating”, the specification also appears to be teaching that the addition of other polymers and conductive additives is within the scope of the invention. Thus the amount of thiophene present of less than 100 percent is within the scope of the present claims, and is

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consistent with the interpretation of the claim phrase “consisting essentially of” as being “comprising”.

Regarding the limitations of “a xerographic fuser component comprising a substrate”, “and thereon a coating”, and “a heating member associated with said fuser component”, claim 1 of ‘918 recites “a xerographic component comprising a film substrate, and thereon a coating comprising a polymer having a thiophene filler dispersed therein, wherein said xerographic component is a fuser member having heat associated therewith”.

Regarding the limitation of “a coating consisting essentially of thiophene-based polymer material”, claim 9 of ‘918 is dependent on claim 1 of ‘918 discussed above, and claims that the thiophene filler is a polymer, specifically a polyethylene dioxythiophene. The term “consisting essentially of” can be interpreted as “comprising” as discussed above.

Regarding the limitation of “a substrate comprising a polymer selected from the group consisting of fluoropolymers, chloropolymers, silicone rubbers, polyarylenes, ethylene diene propene monomer, nitrile rubbers and mixtures thereof”, claim 13 of ‘918 claims the xerographic component which further comprises an intermediate layer positioned between substrate and the coating, wherein the intermediate layer comprises a polymer selected from the group consisting of fluoropolymers, chloropolymers, silicone rubbers, polyarylenes, ethylene diene propene monomer, nitrile rubbers and mixtures thereof. The term “substrate” can also be interpreted as the substrate upon which the coating is applied, the substrate being the intermediate layer in claim 13 of ‘918. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have made a substrate for the present application out of the same material as the intermediate layer claimed by claim 13 of ‘918.

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- b. Claim 4 of the present application recites the same fluoropolymer as claim 6 of '918.
- c. Claim 5 of the present application recites the same thiophene formula I as claim 7 of '918.
- d. Claim 6 of the present application recites the same optionally substituted C₁-C₄ alkylene radical as claim 8 of '918.
- e. Claim 7 of the present application recites the same polyethylene dioxythiophene as claim 9 of '918.
- f. Claim 8 of the present application recites the same 3,4 polyethylenedioxythiophene as claim 10 of '918.
- g. Claim 9 of the present application claims an intermediate layer positioned between the substrate and the coating just as claim 11 of '918 does.
- h. Claim 10 of the present application claims that the intermediate layer comprises a polymer just as claim 12 of '918 does.
- i. Claim 11 of the present application claims that the intermediate layer polymer is selected from the group consisting of fluoropolymers, chloropolymers, silicone rubbers, polyimides, polyamides, polypropylenes, polyethylenes, polybutylenes, polyarylenes, acrylonitriles, polycarbonates, polysulfones, ethylene diene propene monomer, nitrile rubbers and mixtures thereof just as claim 13 of '918 does.
- j. Claim 12 of the present application claims that the fuser component comprises an outer coating on the thiophene-based material coating, just as claim 14 of '918 does.
- k. Claim 14 of the present application claims that the thiophene-based coating is an adhesive just as claim 15 of '918 does.

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- l. Claim 15 of the present application claims that the adhesive further comprises polystyrene sulfonic acid, just as claim 16 (dependent on claim 15) of '918 does.
- m. Claim 24 of the present application recites "a xerographic fuser component comprising a substrate comprising a fluoropolymer selected from the group consisting of i) copolymers of vinylidene fluoride, hexafluoropropylene and tetrafluoroethylene; ii) terpolymers of vinylidene fluoride, hexafluoropropylene and tetrafluoroethylene; and iii) tetrapolymers of vinylidene fluoride, hexafluoropropylene, tetrafluoroethylene, and a cure site monomer, and thereon a coating consisting essentially of a thiophene-based polymer material, and a heating member associated with said fuser component."

Regarding the limitation of "a coating consisting essentially of a thiophene-based polymer material", the term "consisting essentially of", absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, will be construed as equivalent to "comprising." See MPEP 2111.03[R-2]. Page 16, lines 5-20 of the specification teaches that if the polythiophene coating is the surface coating, then the amount of thiophene is about 100 percent, but also adds in the next line that other polymers and conductive additives can be added. Hence in addition to the absence in the present claims of the term "surface" to further qualify the term "coating", the specification also appears to be teaching that the addition of other polymers and conductive additives is within the scope of the invention. Thus the amount of thiophene present of less than 100 percent is within the scope of the present claims, and is consistent with the interpretation of the claim phrase "consisting essentially of" as being "comprising".

Regarding the limitations of “a xerographic fuser component comprising a substrate”, “and thereon a coating”, and “a heating member associated with said fuser component”, claim 1 of ‘918 recites “a xerographic component comprising a film substrate, and thereon a coating comprising a polymer having a thiophene filler dispersed therein, wherein said xerographic component is a fuser member having heat associated therewith”.

Regarding the limitation of “a coating consisting essentially of thiophene-based polymer material”, claim 9 of ‘918 is dependent on claim 1 of ‘918 discussed above, and claims that the thiophene filler is a polymer, specifically a polyethylene dioxythiophene. The term “consisting essentially of” can be interpreted as “comprising” as discussed above.

Regarding the limitation of “a substrate comprising a fluoropolymer selected from the group consisting of i) copolymers of vinylidene fluoride, hexafluoropropylene and tetrafluoroethylene; ii) terpolymers of vinylidene fluoride, hexafluoropropylene and tetrafluoroethylene; and iii) tetrapolymers of vinylidene fluoride, hexafluoropropylene, tetrafluoroethylene, and a cure site monomer”, claim 13 of ‘918 claims the xerographic component which further comprises an intermediate layer positioned between substrate and the coating, wherein the intermediate layer comprises a polymer can be a fluoropolymer. The term “substrate” can also be interpreted as the substrate upon which the coating is applied, the substrate being the intermediate layer in claim 13 of ‘918. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have made a substrate for the present application out of the same material as the intermediate layer claimed by claim 13 of ‘918.

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Claim 6 of '918 further discloses the fluoropolymer as having species from the group consisting of i) copolymers of vinylidene fluoride, hexafluoropropylene and tetrafluoroethylene; ii) terpolymers of vinylidene fluoride, hexafluoropropylene and tetrafluoroethylene; and iii) tetrapolymers of vinylidene fluoride, hexafluoropropylene, tetrafluoroethylene, and a cure site monomer. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used the fluoropolymer species disclosed in claim 6 of '918 for making the substrate of the present application.

g. Claim 25 of the present application recites the same 3,4 polyethylenedioxythiophene as claim 10 of '918.

h. Claim 26 of the present application recites “ an image forming apparatus for forming images on recording medium comprising: a charge-retentive surface to receive an electrostatic latent image thereon; a biasable component capable of receiving an electrical bias for charging one of a xerographic component or copy substrate surface; a development component to apply toner to said charge-retentive surface to develop said electrostatic latent image to form a developed image on said charge retentive surface; a transfer component to transfer the developed image from said charge retentive surface to a copy substrate; and a fuser component for fusing said developed image to a surface of said copy substrate” just as claim 21 of '918 does. The recitation of “a substrate comprising a polymer selected from the group consisting of fluoropolymers, chloropolymers, silicone rubbers, polyarylenes, ethylene diene propene monomer, nitrile rubbers and mixtures thereof, and thereon a coating consisting essentially of a thiophene-based polymer material” has been discussed above regarding claims 24, 27 of the present application.

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Response to Arguments

7. Applicant's arguments with respect to claims 4-15, 24-27 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Hon

Sow-Fun Hon

12/09/04